Remarks

Claims 8 and 9 have been cancelled. Claim 10 has been rewritten in independent form as a program product claim. New claim 11 is an apparatus claim based upon method claim 1. New claim 12, dependent on claim 11, recites further that the embedding means and the excluding means are contained on a chip card.

Claim Objections

Claims 8 and 9 have been objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim (paper no. 11, page 2). Claims 8 and 9 have been cancelled, so this ground for objection no longer applies.

Claim Rejections—35 U.S.C. § 112

1. 35 U.S.C. § 112, First Paragraph

Claims 1-10 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement (paper no. 11, page 2). This rejection is predicated on specific rejections of claims 1 and 10, which are discussed separately below.

a. Claim 1

The Examiner has rejected claim 1 under this paragraph, contending that it is unclear "what embeds the static object" and "by which process the static object is excluded from operations o[n] the file system" (paper no. 11, page 3).

If the Examiner is saying here that the claim does not specify what embeds the static object or how it is excluded from operations on the file system, that is not dispositive of the enablement issue. Rather, the question is whether these aspects of the claimed invention are taught by the specification or would otherwise be apparent to those skilled in the art. Are here the answer is

indeed yes. Thus, the specification notes at page 5, lines 20-25, how static data objects can be created during card initialization by reserving a specified address inside a dynamic file with a specified length and marking it as static so that certain dynamic access routines will not move the static object. And beginning at page 6, the specification also describes two different functions (CreateStaticObject and CreateStaticObjectByAddress) for creating static objects after initialization. So the Examiner's assertion that these aspects of applicants' claimed invention are not enabled simply does not hold up.

The Examiner also wonders whether the static data objects are permanently excluded from all operations. However, claim 1 does not say that the static data objects are excluded from all operations; it merely says that these objects are excluded from (at least some) operations performed dynamically on the file system. Indeed, the specification explicitly describes how the static data objects are accessed in a pre-boot phase of operation (e.g., page 5, lines 10-15).

Finally, the Examiner argues that the utility of an embedded static object permanently excluded from dynamic operations "is not readily understandable". If by this the Examiner means that the utility is not readily understandable from the claim recitations themselves, that is not the criterion for enablement. Rather, it suffices that the utility be taught in the specification. And here too, the utility is clearly taught. Thus, at page 3, lines 8-9, the specification describes how, using the invention, the static data objects "cannot be moved to a different location by the dynamic file management functions, e.g. for free space management, defragmentation purposes." As a consequence, as described at page 3, lines 11-12, static data objects "can be accessed by easy command sequences without any complex file management functions as was mentioned above, for example by boot routines". And, at lines 22-25 of the same page, the specification describes how the invention

> "can also be applied advantageously for multi-application chipcards in order to manage just one single set of user identification or authentication data instead of a separate set for each application. This increases the user convenience because a user needs not remember a lot of PINs, passwords, user names, etc."

Thus, the Examiner's assertion about the utility of applicants' claimed invention is clearly untenable.

b. Claim 10

Citing MPEP 2164.08(a), the Examiner has rejected claim 10 under 35 U.S.C. § 112, first paragraph, as being directed, in effect, to a single-means claim. Applicants have amended claim 10 so that it now recites separate embedding and excluding steps. Assuming, for the sake of argument, that a program product claim is subject to this stricture on means claims, applicants have overcome this rejection by reciting plural steps in claim 10 as amended. New apparatus claim 12 also cites plural steps and therefore likewise avoids this ground for rejection.

2. 35 U.S.C. § 112, Second Paragraph

Claims 1-10 have also been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite (paper no. 11, page 4).

The Examiner contends that the scope of claim 1 is difficult to determine "because it is unclear if 'which are excluded from actions performed dynamically on the file system' refers to the static object[s] or the dynamic file system". By any applicable standard, however, there is only one possible antecedent for "which"—namely, the previously referenced "static data objects". On a grammatical level, the plural verb ("are embedded . . .") requires a plural subject, which "static data objects" is but "file system" is not. And on a semantic level, it would not make sense to say that the dynamic file system itself, as opposed to the static data objects, is excluded from actions performed dynamically on the file system. Claim 1 is thus perfectly clear in this respect and fully compliant with the second paragraph of 35 U.S.C. § 112.

The Examiner also contends that claim 9 refers to "respective steps", whereas claim 1 recites but a single step. Since claim 9 has been cancelled, this ground for rejection is believed to be moot.

Claim Rejections—35 U.S.C. §§ 102 and 103

1. Coy et al.

Claims 1-10 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent 5,644,766 to Coy et al. ("Coy") (paper no. 11, page 5). Applicants respectfully traverse this rejection.

Coy describes a system which a so-called "co-location" algorithm coordinates the movement of a collection of logically clustered data objects through a storage hierarchy 24 (Fig. 1) to preserve their spatial and temporal locality. In reading claim 1 onto Coy, the Examiner equates applicants' static objects with Coy's logically clustered collection, applicants' dynamic file system with Coy's storage hierarchy 24, and applicants' dynamically performed actions with Coy's user-initiated operation (col. 6, lines 52-60) of the co-location algorithm. This comparison, however, is inapposite.

In the first place, Coy's storage hierarchy 24 is not a "file system" as claimed by applicants. As applicants have noted previously, in their first amendment, the online encyclopedia Webopedia (http://www.webopedia.com/), defines a "file system" as "[t]he system that an operating system or program uses to organize and keep track of files" (hyperlinks omitted) A "file system" is thus a programming construct and not simply anything (hardware, software or whatever) that might contain a file. It certainly is not Coy's storage hierarchy 24. Indeed, Coy uses the term "file system" in contrast to the term "storage hierarchy" when he notes, for example, that objects may be assigned to a common data cluster on the basis of their membership in the same file system (col. 3, lines 59-62).

Secondly, Coy's logically clustered data objects are not "static data objects" that are "embedded" in a dynamic file system or excluded from actions performed on that file system. As for being "static" data objects, the very movement of Coy's clustered data objects through the storage hierarchy makes it difficult to regard them as such. As for being "embedded" in a file system, the data clusters often constitute the file system in question, so this label too is wide of the mark. Finally, far from being excluded from actions performed on a file system, the clustered data

objects are the very targets of the actions described by the patentees—namely their movement through the storage hierarchy.

Accordingly, not only are claims 1-5 and 8-10 not anticipated by Coy, but they clearly distinguish patentably over Coy, so the Examiner's rejection of these claims on this reference is untenable.

2. Chen and Kim

Claims 1-5 and 8-10 also stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent 6,549,912 to Chen, while claims 6-7 also stand rejected under 35 U.S.C. § 103 as being unpatentable over Chen in view of U.S. Patent 5,836,010 to Kim (paper no. 11, pages 6 and 7). Applicants respectfully traverse these rejections as well.

Chen describes a so-called loyalty file structure for a smart card that is said to be useful in conjunction with companies' "loyalty" programs for rewarding loyal customers. Thus, a smart card 104 (Fig. 1) may include a number of loyalty files 106-112, each of which has its own password and may be "rented" by a merchant or other loyalty operator (abstract; col. 5, lines 57-59).

In reading claim 1 onto Chen, the Examiner refers to Fig. 5 of the patent, which shows the steps involved in card issuance. In particular, the Examiner points to the steps of embedding a chip in a smart card (step 502), installing a chip operating system and optional applications on the chip (step 504), and constructing loyalty files in chip memory (step 508). The embedding described here, however, is the physical embedding of a chip in a card, and not the logical[1] embedding of a static data object in a dynamic file system as claimed by applicant. It is thus similar in nature to that of the previously cited U.S. Patent 6,357,005 to Devaux et al., in which a physical device (microcircuit 13) was embedded in a physical substrate (CD-ROM 1).

[1] To anticipate a possible objection by the Examiner on this point, claim 1 does use the word "logical" to describe the embedding. However, the nature of both the things embedded (one or more static data objects) and the thing in which they are embedded (a dynamic file system) makes it clear that applicants' embedding is logical rather than physical.

As for the loyalty files 106-112 themselves, even if they were regarded as constituting a dynamic file system, there is no teaching of any static objects that are embedded in this file system and excluded from actions performed dynamically on the file system, as claimed by applicants. Indeed, if there is any embedding here, it is the loyalty files 106-112 in the chip memory and not anything in the loyalty files 106-112 themselves.

Accordingly, not only are claims 1-5 and 8-10 not anticipated by Chen, but they clearly distinguish patentably over this reference as well, so the Examiner's rejection of these claims on this reference is likewise untenable.

Regarding claims 6-7, Kim describes (as part of his summary of prior art) a system in which an integrated circuit (IC) card is used to store an authorization code which is compared with one entered by a user before a computer to which the card is coupled can be accessed. Assuming, for the sake of argument, that the card is accessed "in a pre-boot phase of a host system" as recited in claim 6, neither Kim or Chen teach the base subject matter of claim 1 so this rejection fails as well.

Conclusion

For the foregoing reasons, claims 1-10 as amended and claims 11-12 comply with 35 U.S.C. § 112 and distinguish patentably over the references cited. Accordingly, applicants respectfully request that the outstanding rejection be withdrawn.

Respectfully submitted,
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